<110> Frank Michiels et al.

<120> Improved Barstar Gene

<130> 2428-0108P

<140> unknown
<141> 2001-10-05

<160> 10

<170> PatentIn Ver. 2.0

<210> 1
<211> 270
<212> DNA
<213> Bacillus amyloliquefaciens

<220>
<221> misc_feature
<222> (1)..(270)
<223> CDS, function = "inhibitor of barnase", product =
      "barstar"

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tgtctgaccg gatgggtgga gtacccgctc gttttggaat ggaggcagtt tgaacaaagc 180
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gaaggctgcg acatcaccat catactttct 270

<210> 2
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<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: protein

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Leu His Gln Thr Leu Lys Lys Glu Leu Ala Leu Pro Glu Tyr Tyr Gly
            20   25   30

Glu Asn Leu Asp Ala Leu Trp Asp Cys Leu Thr Gly Trp Val Glu Tyr
        35   40   45

Pro Leu Val Leu Glu Trp Arg Gln Phe Glu Gln Ser Lys Gln Leu Thr
     50   55   60

Glu Asn Gly Ala Glu Ser Val Leu Gln Val Phe Arg Glu Ala Lys Ala
 65   70   75   80

Glu Gly Cys Asp Ile Thr Ile Ile Leu Ser
                85   90

<210> 3
<211> 273
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: other nucleic
     acid, "improved barstar DNA"

<220>
<221> misc_feature
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<400> 3
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gactgcctca ccggctgggt ggagtacccc ctcgtgttgg agtggaggca gttcgagcag 180
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<210> 4
<211> 91
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: protein

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1   5   10   15

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            20   25   30

Gly Glu Asn Leu Asp Ala Leu Trp Asp Cys Leu Thr Gly Trp Val Glu
        35   40   45

Tyr Pro Leu Val Leu Glu Trp Arg Gln Phe Glu Gln Ser Lys Gln Leu
    50   55   60

Thr Glu Asn Gly Ala Glu Ser Val Leu Gln Val Phe Arg Glu Ala Lys
65   70   75   80

Ala Glu Gly Cys Asp Ile Thr Ile Ile Leu Ser
                85   90

<210> 5
<211> 4032
<212> DNA
<213> Artificial Sequence

<220>
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     acid, "plasmid pMV71"

<220>

<221> misc_feature
<222> (1999)..(3400)
<223> label = PRAC1, "promoter region of rice actin gene
        - contains an intron in the leader"

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<222> (3401)..(3676)
<223> label = barstar, "barstar DNA"

<220>
<221> misc_feature
<222> (3677)..(4003)
<223> label = 3'nos, "region containing 3' untranslated
        end of nopaline synthase gene of Agrobacterium
        T-DNA"

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<222> (3399)..(3404)
<223> label = NcoI, "NcoI recognition site"

<220>
<221> misc_feature
<222> (4016)..(4021)
<223> label = KpnI, "KpnI recognition site"

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aataatattg aaaaaggaag agtatgagta ttcaacattt ccgtgtcgcc cttattccct 180
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cctttttgctg gccttttgct cacatgttct ttcctgcgtt atcccctgat tctgtggata 1860
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3

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gttggcctga tcagaatttc gaggtcattc atatgcttga gaagagagtc gggatagtcc 2040
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<210> 6
<211> 563
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: other nucleic
acid, "part of plasmid pLH43"

<220>
<221> misc_feature
<222> (1)..(6)
<223> label = NcoI, "NcoI recognition site"

<220>
<221> misc_feature
<222> (3)..(278)
<223> label = synb*, "improved barstar DNA"

<220>
<221> misc_feature
<222> (279)..(545)
<223> label = 3'nos, "region containing 3' untranslated

4

```
                    end of nopaline synthase gene of Agrobacterium
                    T-DNA"

<220>
<221> misc_feature
<222> (558)..(563)
<223> label = KpnI, "KpnI recognition site"

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gggactgcct caccggctgg gtggagtacc ccctcgtgtt ggagtggagg cagttcgagc 180
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aacatttggc aataaagttt cttaagattg aatcctgttg ccggtcttgc gatgattatc 360
atataatttc tgttgaatta cgttaagcat gtaataatta acatgtaatg catgacgtta 420
tttatgagat gggtttttat gattagagtc ccgcaattat acatttaata cgcgatagaa 480
aacaaaatat agcgcgcaaa ctaggataaa ttatcgcgcg cggtgtcatc tatgttacta 540
gatcgggaag atccccgggt acc                                        563

<210> 7
<211> 5349
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: other nucleic
      acid, "T-DNA of pTTS243"

<220>
<221> misc_feature
<222> Complement((1)..(25))
<223> label = RB, "T-DNA right border"

<220>
<221> misc_feature
<222> Complement((98)..(331))
<223> label = 3'g7, "region containing 3' untranslated
      end of Agrobacterium T-DNA gene 7"

<220>
<221> misc_feature
<222> Complement((332)..(883))
<223> label = bar, "region coding for phosphinthricin
      acetyl transferase"

<220>
<221> misc_feature
<222> Complement((884)..(2258))
<223> label = P35S, "35S promoter of Cauliflower Mosaic
      Virus"

<220>
<221> misc_feature
<222> (2281)..(3969)
<223> label = PE1, "promoter of E1 gene of rice (WO
      92/13956)"

<220>
<221> misc_feature
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5

<222> (3970)..(4245)
<223> label = synb*; "improved barstar DNA"

<220>
<221> misc_feature
<222> (4246)..(4577)
<223> label = 3'chs, "region containing 3' untranslated
      end of chalcone synthase gene"

<220>
<221> misc_feature
<222> Complement((5325)..(5349))
<223> label = LB, "T-DNA left border"

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atatttattg ataaaataac aagtcaggta ttatagtcca agcaaaaaca taaatttatt 180
gatgcaagtt taaattcaga aatatttcaa taactgatta tatcagctgg tacattgccg 240
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6

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<210> 8
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: other nucleic
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<220>
<221> misc_feature
<222> (10)..(15)
<223> label = KpnI, "KpnI recognition site"
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7

<400> 8

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<210> 9
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: other nucleic
      acid, "oligonucleotide CASOLX2"

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<220>
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